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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,794

02/25/2005

Gerd Mansfeld

48353

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1609 7590 04/28/2009

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EXAMINER

BULLOCK, IN SUK C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,794	Applicant(s) MANSFELD ET AL.	
	Examiner IN SUK BULLOCK	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendment to claims 1-8 and 10-12 is hereby acknowledged.

Maintained Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6-8, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP355104393 (hereinafter "JP '393" and relying upon English Abstract supplied by Applicants) in view of U.S. Patent 4,487,613 to Yoshida et al. (hereinafter "Yoshida").

JP '393 discloses a fuel gas odorant that produces sufficient odor in low concentration wherein the odorant comprises at least two different acrylic esters such as methyl acrylate and ethyl acrylate, and tert-butylmercaptan.

JP '393 fails to disclose at least one component as recited in instant claim 1(C) such as pyrazines.

Yoshida discloses a composition for odorizing combustible hydrocarbon gases (col. 1, lines 6-13). The odor intensity of conventional and prior art malodorants can be increased by incorporating 2-methoxy-3-isobutyl pyrazine (col. 3, lines 64-68 and col. 4, lines 36-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of JP '393 by adding the pyrazine compound as taught by Yoshida to increase the intensity of the odor for better detection of gases to prevent hazardous conditions.

With regard to the amount of the odorant composition to be added to the liquid gas, it is within the level of one having ordinary skill in the art to have determined the

most effective amount of the odorant composition to the liquid gas including the claimed range of 5-100 mg/kg of liquid gas.

With regard to the claimed concentration of each component in the odorant composition, it is within the level of one having ordinary skill in the art to have determined the optimum amount of each component for most effective results, i.e., intensity of desired odor level.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP355104393 (hereinafter "JP '393" and relying upon English Abstract supplied by Applicants) in view of U.S. Patent 4,487,613 to Yoshida et al. (hereinafter "Yoshida") as applied to claims 1 and 6 above, and further in view of U.S. Patent 2,430,050 to Gill (hereinafter "Gill").

The combined teachings of JP '393 and Yoshida are as discussed above.

Neither reference discloses including an antioxidant as claimed.

Gill discloses adding antioxidants to malodorants containing mercaptans. The antioxidants include mono or polyhydric derivatives of benzene or its homologs. See col. 1, lines 4-10 and col. 2, lines 3-19.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the combined process of JP '393 and Gill by including an antioxidant to the malodorant compositions because Gill has taught adding antioxidants prevent oxidation of mercaptans in the gas distribution system.

Response to Arguments

Applicants' arguments filed 2/13/2009 have been fully considered but they are not persuasive.

Applicants argue that none of the cited references disclose, suggest or provide motivation to include 2-acetyl pyrazine. The argument is not persuasive because Yoshida discloses a derivative of pyrazine, i.e., 2-methoxy-3-isobutyl pyrazine, and it would have been expected that any derivatives of pyrazine would be equally effective in enhancing the intensity of the odor absent any showing of unexpected results.

Applicants argue that none of the references teach, suggest, or provide a motivation to include their respective odorant mixtures in liquid fuels. The argument is not persuasive because the JP reference discloses a fuel gas which encompasses the claimed liquid gas.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IN SUK BULLOCK whose telephone number is (571)272-5954. The examiner can normally be reached on Monday - Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/In Suk Bullock/
Examiner, Art Unit 1797

/Glenn A Caldarola/
Acting SPE of Art Unit 1797

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